



THE UNIVERSITY OF ARIZONA

College of Medicine

Tucson

Endocrinology, Diabetes, and Metabolism Special Seminar December 12, 2023, 2:00-3:00pm COM Room 5403



SPEAKER: Sara Reyna, PhD

Assistant Professor, Department of Molecular Science
School of Medicine
University of Texas Rio Grande Valley

TOPIC: “Molecular and Physiological Mechanisms Affected by Triterpenoids to Improve Insulin Resistance”

Outcome Objectives:

1. Identify molecular mechanisms modulated by triterpenoids to prevent skeletal muscle inflammation.
2. Identify physiological mechanisms modulated by triterpenoids to protect from obesity.
3. Learn biological properties of triterpenoids for the use as therapeutic agents against obesity-induced insulin resistance.

Dr. Sara M. Reyna is an Assistant Professor in the Division of Human Genetics in the School of Medicine at the University of Texas Rio Grande Valley (UTRGV). She received a Bachelor of Science in Microbiology from Texas A&M University at College Station and a Doctor of Philosophy in Microbiology and Immunology from the University of Texas Health Science Center at San Antonio (UTHSCSA). Her Ph.D. dissertation work challenged the general accepted assumption that skeletal muscle has a passive role in the development of myasthenia gravis and found that various muscle-derived factors may influence the eventual pathological impact of the immune system on muscle. Her postdoctoral fellowships were at UTHSCSA and the Texas Diabetes Institute. Her postdoctoral studies were among the first to support the acceptance of the general hypothesis in diabetes research that increased Toll-like receptor 4 (TLR4) expression and signaling in the skeletal muscle may contribute to the pathogenesis of insulin resistance. In addition, her findings provided new information toward understanding the molecular mechanisms of pro-inflammatory signaling pathways in immune cells of individuals with insulin resistance and T2D. Her laboratory studies the molecular mechanisms of insulin resistance in the skeletal muscle. Specifically, she is investigating the role of macrophage extracellular signal-regulated kinase (ERK) in regulating TLR4 endocytosis and immune responses in relation to the development of insulin resistance. She is also examining the anti-inflammatory and anti-diabetic properties of triterpenoids as therapeutic agents for the prevention and treatment of obesity-induced insulin resistance

Question? Fellowship Program Coordinator Regina Chandler, 626-6376, rwarren@deptofmed.arizona.edu